

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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| Applicant(s): JAMES, Michel | Examiner: KRAUSE, JUSTIN MITCHELL |
| Application No.: 10/562,640 | Art Unit: 3656 |
| Filed: 29 Dec 2005 | Confirmation Number: 8757 |
| Title: RESONATOR PARTICULARLY FOR A VIBRATING GYROSCOPE | |
| Attorney Docket No.: 4005/0272PUS1 | |

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Sir:

In accordance with § 41.37(a), this brief is filed within two months of the filing of the Notice of Appeal on July 27, 2009.

The fees required under § 41.20(b)(2) are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

This brief contains items under the following headings as required by 37 C.F.R. § 41.37 and M.P.E.P. § 1205.2:

- I. Real Party In Interest
- II. Related Appeals and Interferences
- III. Status of Claims
- IV. Status of Amendments
- V. Summary of Claimed Subject Matter
- VI. Grounds of Rejection to be Reviewed on Appeal
- VII. Argument
- VIII. Claims
- Appendix A. Claims
- Appendix B. Evidence
- Appendix C. Related Proceedings

I. REAL PARTY IN INTEREST

The real party in interest for this appeal is Sagem Defense Securite. An Assignment from the inventors to Sagem Defense Securite was recorded on December 29, 2005 at Reel 017431, Frames 0293-0295. No further assignments of this application have been made.

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

A. Total Number of Claims in Application

There are 4 claims in the present application.

B. Current Status of Claims

1. Claims cancelled: 2 and 3
2. Claims withdrawn from consideration but not canceled: none.
3. Claims pending: 1 and 4
4. Claims allowed: none.
5. Claims rejected: 1 and 4

C. Claims On Appeal

The claims on appeal are claims 1 and 4.

IV. STATUS OF AMENDMENTS

A reply was filed May 22, 2009 which contained arguments, but no amendments. This was considered according to the advisory action of June 15, 2009. An amendment with changes to the claims was filed July 6, 2009. Because this amendment did not appear in PAIR and apparently was not associated with the file, a copy was filed again on July 27, 2009 along with the Notice of Appeal. The advisory action of August 10, 2009 indicated that this amendment would be entered for purposes of appeal.

V. SUMMARY OF CLAIMED SUBJECT MATTER

In General

The present invention is a resonator for a gyroscope (fig 1; page 1, line 6). It includes a generally hemispherical shell 1 (fig 1; page 3, line 13) having a pole 2 (fig 1; page 3, line 14) at the center of the shell (fig 1). The pole is held on a support rod 3 (fig 1; page 3, lines 14, 15). An annular edge 4 (fig 1; page 3, line 15) is defined by a plane P (fig 1, page 3, line 16). The inner 5 and outer 6 surfaces of the shell are both hemispheres (fig 1, page 3, lines 16, 17, 20), with centers C1 and C2 respectively (fig 1; page 3, lines 28 and 31).

Claim 1

Claim 1 describes a resonator (fig 1; page 1, line 6) having a shell 1 (fig 1; page 3, line 13) with a pole 2 (fig 1; page 3, line 14). The pole is held by a support rod 3 (fig 1; page 3, lines 14, 15). The shell has an annular edge 4 (fig 1; page 3, line 15) and is defined by an inside surface 5 (fig 1; page 3, line 19) and an outside surface 6 (fig 1; page 3, line 19) that are substantial hemispheres (fig 1; page 3, line 20) and extend around an axis of revolution R (fig 1; page 3, line 17). The centers C1 and C2 (fig 1; page 3, lines 28 and 31) are offset from each other along the axis of revolution, with a predetermined distance d between centers (fig 1; page 3, line 37 and page 4, line 1). A radius R1 of the inside surface is different from a radius R2 of the outside surface (fig 1, page 4, lines 1, 2) so that the shell presents a thickness E (fig 1; page 3, line 35) along an annular edge that is greater than a thickness e (fig 1; page 3, line 33) that the shell presents in the vicinity of the pole (page 3, lines 32-37).

Claim 4

Claim 4 depends from claim 1 and further adds that the centers C1, C2 extend on either side of the plane P (fig 1; page 3, lines 28-32).

VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1 and 4 are anticipated by 35 U.S.C. § 102(b) in view of Chuang et al.,
U.S. Published Application 2003/0100408?

VII. ARGUMENT

In the final rejection of February 25, 2009, the examiner stated that the Chuang et al reference (hereinafter Chuang) disclosed a resonator with a shell 10, having a pole (top of shell) held by a support rod with an annular edge 40. The inner and outer surfaces are substantial hemispheres extending around an axis of revolution. The examiner further states that the centers of the inside and outside surfaces are offset along the axis of revolution with a predetermined distance between them and that the radii of the two surfaces is different so that the thickness of the shell is greater along the edge than in the vicinity of the pole.

Applicants disagree with the examiner's understanding of this reference. First, the device is not a resonator, but is only an exercise device for the wrist. The device does not resonate in any manner and is not connected with a gyroscopic device.

While the Chuang device has a shell 10, it has an open top. The examiner has identified the pole as an unnumbered structure at the top of fig 2, which is also not identified in the specification and does not appear in the perspective view of fig 1 nor the exploded view of fig 20. It is not clear what it is and what it does. It is not shown in cross section, so it does not cover the opening. Applicants do not understand how this can be considered to be a pole of the shell.

Further, the examiner has identified the flange which surrounds the opening as the support rod. Applicants submit that this is not a rod, which is usually considered to have an elongated shape. Further, it is not seen to support anything and especially not a pole.

The examiner states that the shell has inside and outside surfaces which are hemispherical. The reference calls the member 20 generally hemispherical, referring to the outer surface, but there is no indication that the inner surface is hemispherical. Further, since the top of the shell is open, this is not a substantial hemisphere. The claim requires that the centers of the two surfaces are on the axis of revolution. Even assuming for the sake of argument that the inner surface is hemispherical, there is no indication that the centers would have a distance between

them. Further, there is no indication that there is a difference in the radii of the two surfaces as described in the claim.

Thus, there are a number of limitations that are not seen in the Chuang reference, namely the pole, the support rod, hemispherical inner and outer surfaces, centers which are separated by a distance and different radii. Further, it is noted that the examiner has not made any attempt to explain where these features are described in the reference. In view of this applicant submits that claim 1 is not anticipated by Chuang. Nor is there any reason to think that all these features would be obvious. In view of this, applicants submit that claim 1 should be allowed.

Claim 4 depends from claim 1 and also should be allowable based on its dependency. In addition, claim 4 describes the centers as being on opposite sides of the plane P. There is nothing in Chuang that describes this feature either, and again, the examiner has not pointed out how this is described in the reference.

In view of the above, applicants submit that claims 1 and 4 are not anticipated by the Chuang reference and should be allowed.

VIII. CLAIMS

A copy of the claims involved in the present appeal is attached hereto as Appendix A. As indicated above, the claims in Appendix A include the amendments filed by Applicant on July 6 and July 27, 2009.

CONCLUSION

In view of the above, applicants submit that the rejections were made in error and that the examiner should be reversed.

Should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Joe McKinney Muncy, Applicants' Attorney, at 703.621.7140 so that such issues may be resolved as expeditiously as possible.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 50-3828 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; in particular, extension of time fees.

Date: September 22, 2009

Respectfully submitted,



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APPENDIX A

Claims Involved in the Appeal of Application Serial No. 10/562,640

1. A resonator, comprising;

a shell (1);

said shell having a pole (2);

said pole being held by a support rod (3) ;

the shell (1) having an annular edge (4) defined by an inside surface (5) and an outside surface (6) that are substantially hemispheres and that extend around a common axis of revolution (R) ;
wherein a center (C1) of the inside surface (5) and a center (C2) of the outside surface (6) are offset relative to each other along the axis of revolution (5) with a predetermined distance (d) between the centers (C1, C2); and

wherein a radius (R1) of the inside surface (5) is different from a radius (R2) of the outside surface (6) in such a manner that the shell presents thickness (E) along the annular edge (4) that is greater than the thickness (e) that the shell presents in the vicinity of the pole.

4. A resonator according to claim 1 , wherein the centers (C1, C2) of the inside surface and of the outside surface extend on either side of a plane (P) containing the annular edge (4).

APPENDIX B

No evidence pursuant to §§ 1.130, 1.131, or 1.132 or entered by or relied upon by the examiner is being submitted.

APPENDIX C

No related proceedings are referenced in II. above, hence copies of decisions in related proceedings are not provided.